LPDES PERMIT NO. LA0005231, AI No. 2644

LPDES FACT SHEET and RATIONALE
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM (LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA

I. **Company/Facility Name:** Pioneer Americas, LLC doing business as (d/b/a)
Olin Chlor Alkali Products
St. Gabriel Facility
P. O. Box 23
St. Gabriel, LA 70776-0023

II. **Issuing Office:** Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services
Post Office Box 4313
Baton Rouge, Louisiana 70821-4313

III. **Prepared By:** Paula M. Roberts
Industrial Permits Section
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Date Prepared: October 28, 2008

IV. **Permit Action/Status:**

A. Reason For Permit Action:

Proposed revocation and reissuance of a current Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46, LAC 33:IX.2903/40 CFR 122.62, and LAC 33:IX.3105/40 CFR 124.5*.

* In order to ease the transition from NPDES to LPDES permits, dual regulatory references are provided where applicable. The LAC references are the legal references while the 40 CFR references are presented for informational purposes only. In most cases, LAC language is based on and is identical to the 40 CFR language. 40 CFR Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903 and will not have dual references. In addition, state standards (LAC 33:IX. Chapter 11) will not have dual references.

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.2301.F, 4901, and 4903.

B. LPDES permit (LA0005231)- effective date: July 23, 2004
expiration date: July 31, 2009
EPA has not retained enforcement authority.

LPDES permit (LAR10E658)- issued date: January 8, 2008
expiration date: October 1, 2009

C. An LPDES Application was received on April 23, 2008. This application was submitted as a revoke and reissue of the LPDES permit. Submitted with the application was an Expedited Permit Processing request. The request was approved and a response was sent to the permittee on July 15, 2008.

V. Facility Information:

A. Location - 4205 Highway 75 in St. Gabriel, Iberville Parish (Latitude 30°14'38", Longitude 91°06'24")

B. Applicant Activity - the applicant is a chlor-alkali manufacturing facility that manufactures chlorine, caustic and hydrogen.

Currently, Olin operates the facility using mercury cell technology; however, the company is in the process of constructing and expanding a Membrane Chlor Alkali Unit to replace the current Mercury Cell technology utilized on site. The permittee plans to discontinue use of the mercury cell process for the chlor-alkali production purposes, but not during the life of this permit. The new process is scheduled for start-up in January 2009.

Production Rates for each Phase

Phase 1 - Mercury Cell	540 TPD[1]	415.62 (BPT Chlor-Alkali Mercury Cells) 415.63 (BAT Chlor-Alkali-Mercury Cells)
Phase 2 - Membrane Cell	675 TPD[2]	415.63 (BAT Chlor-Alkali-Mercury Cells) 415.65 (NSPS Chlor-Alkali-Diaphragm Cells as per BPJ)[4]
Phase 3 - Membrane Cell	940 TPD[3]	415.63 (BAT Chlor-Alkali-Mercury Cells) 415.65 (NSPS Chlor-Alkali-Diaphragm Cells)[4]

[1]Current Production rate taken from EPA form 2C, Page 2 of 4

[2]Increased Production rate using the new membrane cell technology taken from EPA form 2C, Page 2 of 4
[3]Potential expansion capacity using the new membrane cell technology taken from EPA form 2C, Page 2 of 4
[4]This guideline is being applied on a BPJ basis to the new membrane process technology being proposed at the facility consistent with similarly permitted facilities

C. Technology Basis - (40 CFR Chapter I, Subchapter N-Effluent Guidelines and Standards/Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903)

Guideline	Reference
Inorganic Chemical Manufacturing Point Source Category	40 CFR 415
Chlor-alkali Subcategory (Chlorine and Sodium or Potassium Hydroxide Production)	Subpart F

Other sources of technology based limits:
Current LPDES Permit (effective April 1, 2004)
LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6)
Louisiana Water Quality Management Plan for Sanitary Dischargers
LDEQ Sanitary General Permits-Class II
Best Professional Judgement

D. Fee Rate -
1. Fee Rating Facility Type: Major
2. Complexity Type: V (Mercury Cell and Diaphragm Cell)
3. Wastewater Type: II
4. SIC code: 2812-Alkalis and Chlorine (Inorganic Chemical Manufacturing)

E. Continuous Facility Effluent Flow (Max 30-Day)-0.329 MGD-Phase 1*
Continuous Facility Effluent Flow (Max 30-Day)-0.524 MGD-Phase 2*
Continuous Facility Effluent Flow (Max 30-Day)-0.662 MGD-Phase 3*

* Because of the variations in the flow, the historical 30-day maximum flow was not applicable. Instead the flows used were the flows expected in each phase. These flows were supplied by the permittee in the application located in Figure(s) 7 and 8-Wastewater Flow Balance Diagram

VI. Receiving Waters: Mississippi River

1. TSS (15%), mg/L: 32
2. Average Hardness, mg/L $CaCO_3$: 153.4
3. Critical Flow, cfs: 141,955
4. Mixing Zone Fraction: 0.33
5. Harmonic Mean Flow, cfs: 366,748
6. River Basin: Mississippi River, Segment No. 070301

7. Designated Uses:
The designated uses are primary contact recreation, secondary contact recreation, and fish and wildlife propagation, agriculture and drinking water supply.

Information based on the following: LAC 33:IX Chapter 11; Memorandum from Todd Franklin to Paula Roberts dated June 16, 2008. Hardness and 15% TSS data come from monitoring station #319 on the Mississippi River east of Plaquemine, LA at the Plaquemine ferry landing, midstream is listed in Hardness and TSS Data for All LDEQ Ambient Stations for the Period of Record as of March 1998, LeBlanc.

VII. Outfall Information:

Outfall 001

A. Type of wastewater - the continuous discharge of treated process wastewaters, utility wastewaters, process area stormwater, miscellaneous *de minimis* wastewaters, and previously monitored treated sanitary wastewater from Internal Outfall 101

B. Location - Discharge to the Mississippi River:
(1) TSS - at the discharge of the final unit of the mercury treatment facility prior to commingling with any other streams. The discharge flow rate of the mercury treatment facility shall be monitored continuously and recorded. The daily mass TSS discharge shall be based on the mercury treatment facility daily discharge flow rate.

(2) All other parameters - at the final discharge line after commingling of all other contributing streams
Latitude 30°14'36", Longitude 91°06'25"

C. Treatment - treatment of Mercury Removal Wastewater, water from oil/water separator by the H2 compressor, recovered groundwater, process area stormwater, and water from leachate collection system consists of:

-solids settling
-neutralization
-chemical precipitation
-chemical leaching
-reduction
-diatomaceous earth filtration
-carbon adsorption

Filter cake and spent carbon are disposed off-site in a secure landfill.

Neutralization is applied to the following streams: non-chromate cooling tower blowdown and water treatment regeneration, chlorine

tank and tank car washings, caustic tank and tank car washings, cleaning solution for cell maintenance, annual vessel cleaning and cooling tower drain.

Gas scrubber and heat exchanger condensate treatment consists of:
-neutralization
-reduction

Sanitary discharge and plant laboratory drains are treated by settling and activated sludge system; fecal coliform is limited and monitored internally at Outfall 101.

D. Flow - Continuous, (Max 30-Day) 0.329 MGD

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070301

Internal Outfall 101

A. Type of wastewater - the continuous discharge of treated sanitary wastewater

B. Location - at the point of discharge from the 12,000 GPD activated sludge treatment unit prior to mixing with other waters at Latitude 30°14'29", Longitude 91°06'21"

C. Treatment - treatment of sanitary wastewaters consists of aeration, activated sludge treatment and chlorination with calcium hypochlorite

D. Flow - Continuous, (Max 30-Day) 0.012 MGD

E. Receiving waters - to Mississippi River via Outfall 001

F. Basin and segment - Mississippi River Basin, Segment 070301

Outfall 002

A. Type of wastewater - the intermittent discharge of maintenance shop floor drain wastewater, vehicle rinse water from employee vehicle rinse station, and low contamination potential plant stormwater runoff. The stormwater consists of plant stormwater from approx. 42 acres which includes all the plant except 3.5 acres around and including the cell building, which discharge via Outfall 001. This discharge plus flows not generated within the plant - Ineos Fluor Outfalls 003 and 004 and Syngenta Outfalls 001 and 002 are conveyed to the Mississippi River via a closed 24"above ground pipe.

B. Location - at the point of discharge from the 2 million gallon storm lagoon prior to commingling with other waters in the shared pipeline at Latitude 30°14'31", Longitude 91°06'12"*

C. Treatment - None

D. Flow - Intermittent

E. Receiving waters - Mississippi River

F. Basin and segment - Mississippi River Basin, Segment 070301

* The discharges from Syngenta (Outfalls 001 and 002) and Ineous Fluor (Outfalls 003 and 004) are monitored at their respective plants prior to joining in a common pipe with Olin's Outfall 002. Olin's Outfall 002 is also monitored prior to the commingling of these effluents. Outfall 002 is combined with the effluents from Syngenta and Ineous Fluor and is piped to the Mississippi River.

VIII. Proposed Permit Limits:

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

Summary of Proposed Changes From the Current LPDES Permit:

A. There is a slight increase in the monthly average and daily maximum effluent limitations for total suspended solids for Phase 1(Mercury Cell) from 346 lbs/day to 348 lbs/day. Due to the production rate increase of chlorine for Phases 2 and 3, the monthly average and daily maximum effluent limitations for total suspended solids will increase.

B. There is a slight decrease from the current permit in the daily maximum effluent limitations for Oil & Grease for Phase 1 (Mercury Cell) from 47 lbs/day to 41 lbs/day. Due to the production rate increase of chlorine for Phases 2 and 3, the monthly average and daily maximum effluent limitations for Oil & Grease will increase during these two phases.

IX. Permit Limit Rationale:

The following section sets forth the principal facts and the significant factual, legal, methodological, and policy questions considered in preparing the draft permit. Also set forth are any calculations or other explanations of the derivation of specific effluent limitations and conditions, including a citation to the applicable effluent limitation guideline or performance standard provisions as required under LAC 33:IX.2707/40 CFR Part 122.44 and reasons why they are applicable or an explanation of how the alternate effluent limitations were developed.

A. TECHNOLOGY-BASED VERSUS WATER QUALITY STANDARDS-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Following regulations promulgated at LAC 33:IX.2707.L.2.b/40 CFR Part 122.44(l)(2)(ii), the draft permit limits are based on either technology-based effluent limits pursuant to LAC 33:IX.2707.A/40 CFR Part 122.44(a) or on State water quality standards and requirements pursuant to LAC 33:IX.2707.D/40 CFR Part 122.44(d), whichever are more stringent.

B. TECHNOLOGY-BASED EFFLUENT LIMITATIONS AND CONDITIONS

Regulations promulgated at LAC 33:IX.2707.A/40 CFR Part 122.44(a) require technology-based effluent limitations to be placed in LPDES permits based on effluent limitations guidelines where applicable, on BPJ (best professional judgement) in the absence of guidelines, or on a combination of the two. The following is a rationale for types of wastewaters. See outfall information descriptions for associated outfall(s) in Section VII. Regulations also require permits to establish monitoring requirements to yield data representative of the monitored activity [LAC 33:IX.2715/40 CFR 122.48(b)] and to assure compliance with permit limitations [LAC 33:IX.2707.I./40 CFR 122.44(I)].

1. Outfall 001 - the continuous discharge of treated process wastewaters, utility wastewaters, process area stormwater, miscellaneous *de minimis* wastewaters, and previously monitored treated sanitary wastewater from Internal Outfall 101 Process Wastewaters

Pioneer Americas, LLC doing business as (d/b/a) Olin Chlor Alkali Products, St. Gabriel Facility is subject to Best Practicable Control Technology Currently Available (BPT) and Best Available Technology Economically Achievable (BAT) effluent limitation guidelines listed below:

Manufacturing Operation	Guideline
Chlor-alkali Subcategory (Chlorine and Sodium or Potassium Hydroxide Production)	40 CFR 415.62, Subpart F 40 CFR 415.63, Subpart F

PROCESS-OUTFALL 001(PHASE 1)

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	Continuous

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
pH Range Excursions No. of Events >60 minutes	---	0 (*1)	---	---	Continuous
pH Range Excursions Monthly Total Accumulated Time in Minutes	---	446 (*1)	---	---	Continuous
pH (Standard Units)	---	---	Report (*2) (Min)	Report (*2) (Max)	Continuous
TSS	348	696	---	---	3/week
Oil & Grease (*3)	---	41	---	---	1/month
Total Residual Chlorine	2.1	3.5	---	---	3/week
Total Mercury	0.11	0.25	---	---	5/week

(*1) The pH shall be within the range of 6.0-9.0 standard units at all times subject to the continuous monitoring pH range excursion provisions at Part II.H of the permit.
(*2) The permittee shall report on the Discharge monitoring reports both the minimum and maximum instantaneous pH values measured.
(*3) The daily maximum limitation for Oil and Grease is continued from the current LPDES permit. That limitation is based on 15 mg/l (Daily Maximum). BPJ Oil and Grease concentrations are calculated utilizing the principles of mass balance, flow, and mass loadings from the previously issued LPDES permit.

Calculations and basis of permit limitations are found (at Appendix A-1 and associated appendices). See below for site-specific considerations.

For Phases 2 and 3, Pioneer Americas, LLC doing business as (d/b/a) Olin Chlor Alkali Products, St. Gabriel Facility, the Best Available Technology Economically Achievable (BAT) effluent limitation guidelines and New Source Performance Standards listed below are applied by Best Professional Judgement (BPJ):

Manufacturing Operation	Guideline
Chlor-alkali Subcategory (Chlorine and Sodium or Potassium Hydroxide Production)	40 CFR 415.63, Subpart F 40 CFR 415.65, Subpart F

PROCESS-OUTFALL 001(PHASE 2)

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	Continuous
pH Range Excursions No. of Events >60 minutes	---	0 (*1)	---	---	Continuous
pH Range Excursions Monthly Total Accumulated Time in Minutes	---	446 (*1)	---	---	Continuous
pH (Standard Units)	---	---	Report (*2) (Min)	Report (*2) (Max)	Continuous
TSS	691	1489	---	---	3/week
Oil & Grease (*3)	---	66	---	---	1/month
Total Residual Chlorine	10.7	17.6	---	---	3/week
Total Mercury (*4)	0.11	0.25	---	---	5/week
Total Copper	6.62	16.20	---	---	5/week
Total Lead	2.57	6.35	---	---	5/week
Total Nickel	5.00	13.10	---	---	5/week

(*1) The pH shall be within the range of 6.0-9.0 standard units at all times subject to the continuous monitoring pH range excursion provisions at Part II.H of the permit.
(*2) The permittee shall report on the Discharge monitoring reports both the minimum and maximum instantaneous pH values measured.
(*3) The daily maximum limitation for Oil and Grease is continued from the current LPDES permit. That limitation is based on 15 mg/l (Daily Maximum). BPJ Oil and Grease concentrations are calculated utilizing the principles of mass balance, flow, and mass loadings from the previously issued LPDES permit.
(*4) Mercury limits are being retained from Phase 1 on a BPJ basis to account for the decommissing process of the mercury cells.

Calculations and basis of permit limitations are found (at Appendix A-2 and associated appendices). See below for site-specific considerations.

PROCESS-OUTFALL 001(PHASE 3)

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	Continuous
pH Range Excursions No. of Events >60 minutes	---	0 (*1)	---	---	Continuous
pH Range Excursions Monthly Total Accumulated Time in Minutes	---	446 (*1)	---	---	Continuous
pH (Standard Units)	---	---	Report (*2) (Min)	Report (*2) (Max)	Continuous
TSS	962	2072	---	---	3/week
Oil & Grease (*3)	---	83	---	---	1/month
Total Residual Chlorine	14.9	24.4	---	---	3/week
Total Mercury (*4)	0.11	0.25	---	---	5/week
Total Copper	9.21	22.56	---	---	5/week
Total Lead	3.57	8.84	---	---	5/week
Total Nickel	6.96	18.24	---	---	5/week

(*1) The pH shall be within the range of 6.0-9.0 standard units at all times subject to the continuous monitoring pH range excursion provisions at Part II.H of the permit.
(*2) The permittee shall report on the Discharge monitoring reports both the minimum and maximum instantaneous pH values measured.
(*3) The daily maximum limitation for Oil and Grease is continued from the current LPDES permit. That limitation is based on 15 mg/l (Daily Maximum). BPJ Oil and Grease concentrations are calculated utilizing the principles of mass balance, flow, and mass loadings from the previously issued LPDES permit.
(*4) Mercury limits are being retained from Phase 1 on a BPJ basis to account for the decommissing process of the mercury cells.

Calculations and basis of permit limitations are found (at Appendix A-3 and associated appendices). See below for site-specific considerations.

Site-Specific Consideration(s)

None

2. Internal Outfall 101 - the continuous discharge of treated sanitary wastewater

Sanitary wastewater that is included as a part of the process wastewater stream receive BPJ allocations for BOD_5 and TSS loading(s) to the process wastewaters at Appendix A. Sanitary wastewaters (internal or external) are regulated in accordance with LAC 33:IX.711 or 709.B, by BPJ utilizing the sanitary general permits issued by this Office, and the Louisiana Water Quality Management Plan, Areawide Sanitary Effluent Limits Policy and Statewide Sanitary Effluent Limits Policy, as applicable. Concentration limits are used in accordance with LAC 33:IX.2709.F.1.b which states that mass limitations are not necessary when applicable standards and limitations are expressed in other units of measurement. LAC 33:IX.709.B references LAC 33:IX.711 which express BOD_5 and TSS in terms of concentration. Sanitary general permits are issued in classes according to the maximum expected facility flow.

SANITARY CLASS II, 0.005<= 0.012 MGD <0.025 MGD

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	WEEKLY AVERAGE	WEEKLY AVERAGE	WEEKLY AVERAGE	
Flow, MGD	Report	Report	---	---	1/3 months
BOD_5	---	---	30	45	1/3 months
TSS	---	---	30	45	1/3 months
Fecal Coliform colonies/100ml	---	---	200	400(*)	1/3 months

(*) Shall be reported as a daily maximum in lieu of a weekly average.

3. Outfall 002 - the intermittent discharge of maintenance shop floor drain wastewater, vehicle rinse water from employee vehicle rinse station, and low contamination potential plant stormwater runoff

Uncontaminated or low potential contaminated stormwater discharged through discrete outfall(s) not associated with process wastewater shall receive the following BPJ limitations in accordance with this Office's guidance on stormwater, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6). If a potential exists for a toxic parameter to be discharged through a stormwater, then that toxic parameter shall receive a BPJ limitation

based on the OCPSF guidelines (40 CFR 414), Subpart J or a limitation based on empirical data for permitted hazardous landfills in Louisiana. The daily maximum limitation of 35 mg/l for TOC and the daily maximum limitation of 32 ug/l for Total Mercury was retained from the previous permit. The Mercury limitation was established as a best professional judgement (BPJ) limitation equivalent to the 99th percentile of DMR data for Outfall 002 for the period January 1993 to July 1995.

PARAMETER(S)	MASS, LBS/DAY unless otherwise stated		CONCENTRATION, MG/L unless otherwise stated		MEASUREMENT FREQUENCY
	MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM	
Flow, MGD	Report	Report	---	---	1/day
TOC	---	---	---	35	2/week
Oil & Grease	---	---	---	15	2/week
Total Mercury	---	---	---	32 ug/l	2/week
pH Standard Units	---	---	6.0 (min)	9.0 (max)	1/day

In accordance with LAC 33:IX.2707.I.3 and [40 CFR 122.44(I)(3) and (4)], a Part II condition is proposed for applicability to all storm water discharges from the facility, either through permitted outfalls or through outfalls which are not listed in the permit or as sheet flow. The Part II condition requires a Storm Water Pollution Prevention Plan (SWP3) within six (6) months of the effective date of the final permit, along with other requirements. If the permittee maintains other plans that contain duplicative information, those plans could be incorporated by reference to the SWP3. Examples of these type plans include, but are not limited to: Spill Prevention Control and Countermeasures Plan (SPCC), Best Management Plan (BMP), Response Plans, etc. The conditions will be found in the draft permit. Including Best Management Practice (BMP) controls in the form of a SWP3 is consistent with other LPDES and EPA permits regulating similar discharges of stormwater associated with industrial activity, as defined in LAC 33:IX.2522.B.14 [40 CFR 122.26(b)(14)].

C. WATER QUALITY-BASED EFFLUENT LIMITATIONS

Technology-based effluent limitations and/or specific analytical results from the permittee's application were screened against state water quality numerical standard based limits by following guidance procedures established in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, April 16, 2008. Calculations, results, and documentation are given in Appendices B-1 through B-4.

In accordance with 40 CFR § 122.44 (d)(1)/LAC 33:IX.2707.D.1, the existing (or potential) discharge (s) was evaluated in accordance with the Permitting

Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, April 16, 2008, to determine whether pollutants would be discharged "at a level which will cause, have the reasonable potential to cause, or contribute to an excursion above any state water quality standard." Calculations, results, and documentation are given in Appendix B.

The following pollutants received water quality based effluent limits:

POLLUTANT(S)
None

Minimum quantification levels (MQL's) for state water quality numerical standards-based effluent limitations are set at the values listed in the Permitting Guidance Document for Implementing Louisiana Surface Water Quality Standards, LDEQ, April 16, 2008. They are also listed in Part II of the permit.

TMDL Waterbodies
Subsegment 070301 of the Mississippi River Basin is listed on LDEQ's FINAL 2006 305(b)/303(d) Integrated Report dated February 15, 2007 as fully supporting its desginated uses. Therefore, there are no impairments of concern and no additional permit limitations included in this permit.

D. Biomonitoring Requirements

It has been determined that there may be pollutants present in the effluent which may have the potential to cause toxic conditions in the receiving stream. The State of Louisiana has established a narrative criteria which states, "toxic substances shall not be present in quantities that alone or in combination will be toxic to plant or animal life." The Office of Environmental Services requires the use of the most recent EPA biomonitoring protocols.

Whole effluent biomonitoring is the most direct measure of potential toxicity which incorporates both the effects of synergism of effluent components and receiving stream water quality characteristics. Biomonitoring of the effluent is, therefore, required as a condition of this permit to assess potential toxicity. The biomonitoring procedures stipulated as a condition of this permit for Outfall 001 are as follows:

TOXICITY TESTS	FREQUENCY
Acute static renewal 48-hour definitive toxicity test using Daphnia pulex	1/year

Acute static renewal 48-hour definitive toxicity test using fathead minnow (Pimephales promelas)	1/year

Toxicity tests shall be performed in accordance with protocols described in the latest revision of the "Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms." The stipulated test species are appropriate to measure the toxicity of the effluent consistent with the requirements of the State water quality standards. The biomonitoring frequency has been established to reflect the likelihood of ambient toxicity and to provide data representative of the toxic potential of the facility's discharge in accordance with regulations promulgated at LAC 33:IX.2715/40 CFR Part 122.48.

Results of all dilutions as well as the associated chemical monitoring of pH, temperature, hardness, dissolved oxygen, conductivity, and alkalinity shall be documented in a full report according to the test method publication mentioned in the previous paragraph. The permittee shall submit a copy of the first full report to the Office of Environmental Compliance. The full report and subsequent reports are to be retained for three (3) years following the provisions of Part III.C.3 of this permit. The permit requires the submission of certain toxicity testing information as an attachment to the Discharge Monitoring Report.

This permit may be reopened to require effluent limits, additional testing, and/or other appropriate actions to address toxicity if biomonitoring data show actual or potential ambient toxicity to be the result of the permittee's discharge to the receiving stream or water body. Modification or revocation of the permit is subject to the provisions of LAC 33:IX.3105/40 CFR 124.5. Accelerated or intensified toxicity testing may be required in accordance with Section 308 of the Clean Water Act.

Dilution Series

The permit requires five (5) dilutions in addition to the control (0% effluent) to be used in the toxicity tests. These additional effluent concentrations shall be 0.029%, 0.022%, 0.016%, 0.012% and 0.0092%. The low-flow effluent concentration (critical dilution) is defined as 0.022% effluent.

X. Compliance History/DMR Review:

A. LDEQ records were reviewed for the period October 2003 through to July 2008 and revealed that the facility currently does not have any orders issued regarding the LPDES Water Discharge Permit, however the following was noted in the review:

On October 13, 2003, Pioneer Americas, LLC was issued Penalty Assessment WE-P-03-0562 for violations cited in MM-CN-02-0002 and MM-CN-02-0002A. The penalty amount set forth in the penalty

assessment was paid to the Department on October 20, 2003, therefore all violations that were noted during the inspection conducted on March 6, 2003 have been addressed.

On February 17, 2004, a Violations Clear Letter (VCL) was issued indicating that the issues identified in the Findings of Fact of MM-CN-02-0002, MM-CN-02-0002A, and WE-P-03-0562 have been adequately addressed.

B. A DMR review of the monitoring reports for the period August 2004 through March 2008 revealed the following effluent violations:

DATE	PARAMETER	OUTFALL	REPORTED VALUE		PERMIT LIMITS	
			MONTHLY AVERAGE	DAILY MAXIMUM	MONTHLY AVERAGE	DAILY MAXIMUM
May 2007	Mercury	001	0.07 lbs/day	0.30 lbs/day	0.11 lbs/day	0.25 lbs/day
April 2007	Mercury	001	0.04 lbs/day	0.30 lbs/day	0.11 lbs/day	0.25 lbs/day
March 2008	Mercury	001	0.07 lbs/day	0.61 lbs/day	0.11 lbs/day	0.25 lbs/day
March 2008	TSS	101	44 mg/l	46 mg/l	30 mg/l	45 mg/l

C. A review of the inspection reports for the period May 2006 through May 2008 revealed the following inspections and the findings.

Date-May 17, 2006
Findings:

1. The effluent and receiving waters were evaluated visually and by DMR review.
2. All areas evaluated appeared to be satisfactory.

Date - May 9, 2007
Findings:

1. A DMR review was done from April 2006 until March 2007 and found no reported exceedance.
2. The receiving waters looked good. There was no smell, no oily sheen and no solids present.
3. The SPCC plan was on site and appeared to be in order.
4. All other aspects of the inspection appeared to be satisfactory.

XI. "IT" Questions - Applicant's Responses

The "IT" Questions along with the applicant's responses can be found in the Permit Application dated April 23, 2008. See Appendix E.

XII. Endangered Species:

The receiving water body, Subsegment 070301 of the Mississippi River Basin, has been identified by the U.S. Fish and Wildlife Service (F'S) as habitat for the Pallid Sturgeon, which is listed as an endangered species. LDEQ will submit this draft permit to the F'S for review in accordance with a letter dated 10/24/07 from Boggs (F'S) to Brown (LDEQ). As set forth in the Memorandum of Understanding between the LDEQ and the F'S, and based on information provided by the F'S, LDEQ has determined that the issuance of the LPDES permit is not likely to have an adverse effect upon the Pallid Sturgeon. The effluent limitations established in the permit ensure protection of aquatic life and maintenance of the receiving water as aquatic habitat. Therefore, the issuance of the LPDES permit is not likely to have an adverse effect on any endangered or candidate species or the critical habitat.

XIII. Historic Sites:

The discharge is from an existing facility location with expansion activities which will not include disturbance of soils outside of the current operating area. Therefore, there should be no potential effect to sites or properties on or eligible for listing on the National Register of Historic Places, and in accordance with the "Memorandum of Understanding for the Protection of Historic Properties in Louisiana Regarding LPDES Permits" no consultation with the Louisiana State Historic Preservation Officer is required.

XIV. Tentative Determination:

On the basis of preliminary staff review, the Department of Environmental Quality has made a tentative determination to revoke and reissue a permit for the discharge described in the application.

XV. Variances:

No requests for variances have been received by this Office.

XVI. Public Notices:

Upon publication of the public notice, a public comment period shall begin on the date of publication and last for at least 30 days thereafter. During this period, any interested persons may submit written comments on the draft permit and may request a public hearing to clarify issues involved in the permit decision at this Office's address on the first page of the fact sheet. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing.

Public notice published in:

Local newspaper of general circulation

Office of Environmental Services Public Notice Mailing List